REMARKS

The above amendments are made in response to the Non-Final Office Action of May 29, 2009. Claims 1-17 are pending in the present Application. Claims 1-6, 10 and 17 have been amended, no claims have been cancelled and claims 14-17 have been withdrawn, leaving claims 1-17 for consideration upon entry of the present Amendment.

Support for the amendments to claim 1 can be found at least in the specification on page 14, lines 17-22 and on page 15, lines 10-14. In addition, claims 2-6, 10 and 17 have been amended for clarity and proper antecedent basis, supported throughout the specification. Reconsideration and allowance of the claims are respectfully requested in view at least the above amendments and the following remarks.

Claim Rejections Under 35 U.S.C. § 103(a)

Claims 1-13 stand rejected under 35 U.S.C. § 103(a), as being allegedly unpatentable over Choi et al. (U.S. Patent Publication No. 2003/0105222, hereinafter "Choi") in light of Izaki et al. (U.S. Patent No. 3,970,629, hereinafter "Izaki") as stated on pages 2-4 of the Non-Final Office Action dated May 29, 2009. Applicants respectfully traverse this rejection for at least the following reasons.

For an obviousness rejection to be proper, the Examiner is expected to meet the burden of establishing why the differences between the prior art and that claimed would have been obvious. (MPEP 2141(III)) "A patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *KSR Int'l Co. v. Teleflex Inc.,* 127 S.Ct. 1727, 1741 (2007). To find obviousness, the Examiner must "identify a reason that would have prompted a person of ordinary skill in the art in the relevant field to combine the elements in the way the claimed new invention does." *Id.*

The Examiner states that Choi teaches a method of making a styrene-butadiene latex for coating paper and states that it would have been obvious to have selected the claimed compositions because Choi teaches ranges, which encompass these compositions. (Detailed Action dated May 29, 2009, p. 2) The Examiner also states that Choi teaches that the gel content and the molecular weight are adjusted with the chain

transfer agent, states that Choi fails to teach that this agent is added singly after the coating steps, that Izaki teaches that it is known in the art that the chain transfer agent may be added singly and that it would have been obvious to have introduced the chain transfer agent singly. (Detailed Action dated May 29, 2009, p. 3)

The Applicants disclose a method of preparing a styrene-butadiene latex in which when the conversion ratio, after adding monomers for polymerization of outermost shell, is 60 to 95%, 0.005 to 5 parts by weight of a chain transfer agent is added to select the gel content and molecular weight of the outermost layer of the latex. Accordingly, the styrene-butadiene latex prepared by the disclosed method has superior adhesive force, excellent mechanical and chemical stability and provides a fast drying ink.

A characteristic of the disclosed styrene-butadiene latex is that a chain transfer agent alone in a selected amount is added to control the gel content and molecular weight of the outermost layer of the latex. Choi does not disclose or suggest adding a chain transfer agent alone to control the gel content and molecular weight of the outermost layer of the latex. However, Izaki discloses that the chain transfer agent may be added singly, as opposed to introducing it with the monomer composition in order to adjust the molecular weight and gel content of the formed latex shell.

To further clarify the difference between the present invention and that disclosed by Choi and Izaki, claim 1 has been amended to recite, *inter alia*:

1) "adding monomers and a chain transfer agent to the core latex when a conversion ratio in the manufacturing of the core latex is 55 to 95% to polymerize the monomers on the core latex through emulsion polymerization; and" (Specification p. 14, line 21)

2) after the multiple shell polymerization is completed, "adding the chain transfer agent alone when a conversion ratio of an outermost layer is 60 to 95% to select a gel content and a molecular weight of the outermost layer of the latex" (Specification, page 15, lines 5-17).

Also, the Applicants respectfully note that Choi has been cited as "X" in the Written Opinion and International Search Report of the parent PCT application (PCT/KR2004/000279); however, the novelty and the inventive step of the present invention are acknowledged in International Preliminary Report on Patentability

(attached), which recites:

> It is noted in claim 1 that a chain transfer agent is singly added after manufacturing step of shell polymers to control the properties of the outermost layer of the latex, while a chain transfer agent in D1 is added in each step of preparing seed, the first shell, and the second shell.
>
> Moreover, D1 does not suggest that the outermost layer of latex modified by a chain transfer agent renders a superior adhesive force to final core-shell latex. Consequently, single addition of a chain transfer agent after manufacturing step of shell polymers offers the basis of the inventive step to claim 1.
> (International Preliminary Report on Patentability, PCT/KR2004/000279, p. 3, Emphasis added)

In conclusion, the method of manufacture of a styrene-butadiene latex as recited in claim 1 is not obvious and is patentable over Choi in light of Izaki. Claims 2-13 depend from claim 1, thus are also patentable over Choi in light of Izaki. Accordingly, it is respectfully requested that the rejections to claims 1-13 under 35 U.S.C. § 103 be withdrawn and the instant claims be allowed to issue.

Rejoinder

The Applicants respectfully request that the Examiner rejoin non-elected claims 14-16 because claims 14-16 ultimately depend from claim 1, thus incorporate all of the limitations of claim 1. (MPEP § 821.04)

Conclusion

It is believed that the foregoing amendments and remarks fully comply with the Office Action and that the claims herein should now be allowable to Applicants. Accordingly, reconsideration and withdrawal of the objection(s) and rejection(s) and allowance of the case are respectfully requested.

Applicants hereby petition for any necessary extension of time required under 37 C.F.R. 1.136(a) or 1.136(b) or any other necessary fees(s), which may be required for entry and consideration of the present Reply.

If there are any additional charges due with respect to this Amendment or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Applicants' Attorneys.

Respectfully submitted,

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